

## 3 PIECES SWING BALL VALVE FORGED A105N CARBON STEEL CLASS 800

3 pieces forged carbon steel ball valve fully encapsulated bolts with full bore for Chemical industries, petrochemical industries, hydraulic installation, heating, water distribution, compressed air.

Ball valve with firesafe certificate API 607 to reduce risks in case of fire.

Graphite packing and PTFE filled with glass seat gasket on stem, PTFE filled with glass seat.

Compatible with explosive atmosphere, ATEX Zone 1&21 and Zone 2&22 thanks to the antistatic device.

3 pieces Swing type.

Handling with locking device, on request possible with handwheel or T handle.

Thanks to the ISO 5211 plate, an actuator can be installed on the valve.



**Size :** DN15 to DN50 (NPS 1/2" to 2")

**Connection :** Female NPT or SW

**Min Temperature :** -29°C

**Max Temperature :** +200°C

**Max Pressure :** 136 Bars (Class 800)

**Specifications :** Antistatic device, ATEX

ISO 5211 mounting pad

Anti blow-out stem, full bore

Fully encapsulated bolts

Fire safe API 607 V.4

**Materials :** Forged carbon steel ASTM A105N

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### SPECIFICATIONS :

- Full bore
- Anti blow-out stem
- Packing with elastic rings
- Double tightness on stem by PTFE filled with 25% glass fiber packing and FKM O ring
- Double tightness between body and ends by FKM O ring and graphite gasket
- Antistatic device
- Fire safe according to API 607 version 4
- Atex
- With ISO 5211 mounting pad
- Fully encapsulated bolts
- Class 800
- On request : locking device, handwheel or T handle

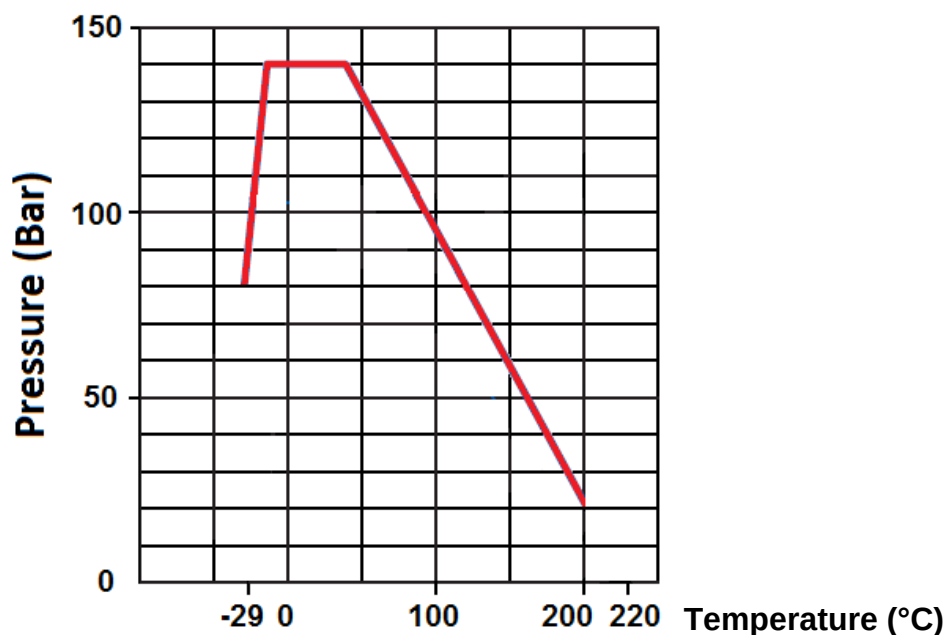
### USE :

- Chemical and pharmaceutical industries, petrochemical industries, hydraulic installation, compressed air
- Steam : 16 bars maximum
- Min and max Temperature Ts : -29°C to + 200°C
- Max pressure Ps : 136 bars ( see graph under )

### FLOW COEFFICIENT Kvs ( M3 / h ) :

| DN (mm)      | 15   | 20   | 25   | 32    | 40    | 50    |
|--------------|------|------|------|-------|-------|-------|
| NPS (")      | 1/2" | 3/4" | 1"   | 1"1/4 | 1"1/2 | 2"    |
| Kvs ( m3/h ) | 10.4 | 28.5 | 41.5 | 71.8  | 103.8 | 216.2 |

### PRESSURE / TEMPERATURE GRAPH :



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### TORQUES VALUES ( in Nm without safety coefficient ) :

| DN (mm)        | 15   | 20   | 25   | 32    | 40    | 50    |
|----------------|------|------|------|-------|-------|-------|
| NPS (")        | 1/2" | 3/4" | 1"   | 1"1/4 | 1"1/2 | 2"    |
| Pressure (bar) |      |      |      |       |       |       |
| 20             | 6.8  | 10.1 | 13.5 | 16.9  | 27    | 56.9  |
| 35             | 6.8  | 10.1 | 16.9 | 20.3  | 33.8  | 74.5  |
| 50             | 6.8  | 10.1 | 20.3 | 27    | 47.4  | 101.6 |
| 70             | 6.8  | 13.5 | 22.4 | 33.8  | 59.6  | 162.7 |
| 105            | 8    | 17.5 | 33.8 | 40.6  | 67.8  | 244   |
| 138            | 16.9 | 33.8 | 56.2 | 77.3  | 135.3 | 284.7 |

### BOLT TIGHTENING TABLE ( in Nm ) :

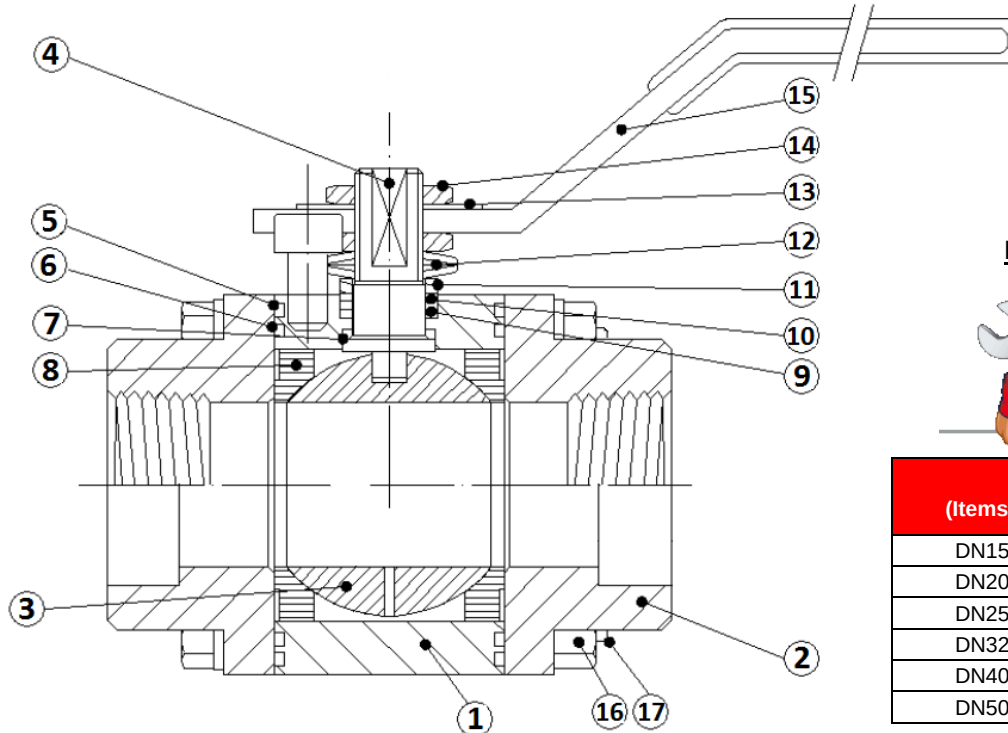
| DN (mm)       | 15   | 20   | 25   | 32    | 40    | 50    |
|---------------|------|------|------|-------|-------|-------|
| NPS (")       | 1/2" | 3/4" | 1"   | 1"1/4 | 1"1/2 | 2"    |
| Torque ( Nm ) | 15.9 | 31.9 | 31.9 | 56    | 56    | 143.3 |

### RANGE :

- Ball valve class 800 threaded NPT **Ref.745** from DN 15 to 50 ( NPS 1/2" to 2" )
- Ball valve class 800 with Socket Welding ends **Ref. 7451** from DN 15 to 50 ( NPS 1/2" to 2" )

## 3 PIECES SWING BALL VALVE FORGED A105N CARBON STEEL CLASS 800

### MATERIALS :



### Repairability :



#### **\*Gaskets kit (Items 5, 6, 7, 8, 9 and 10)**

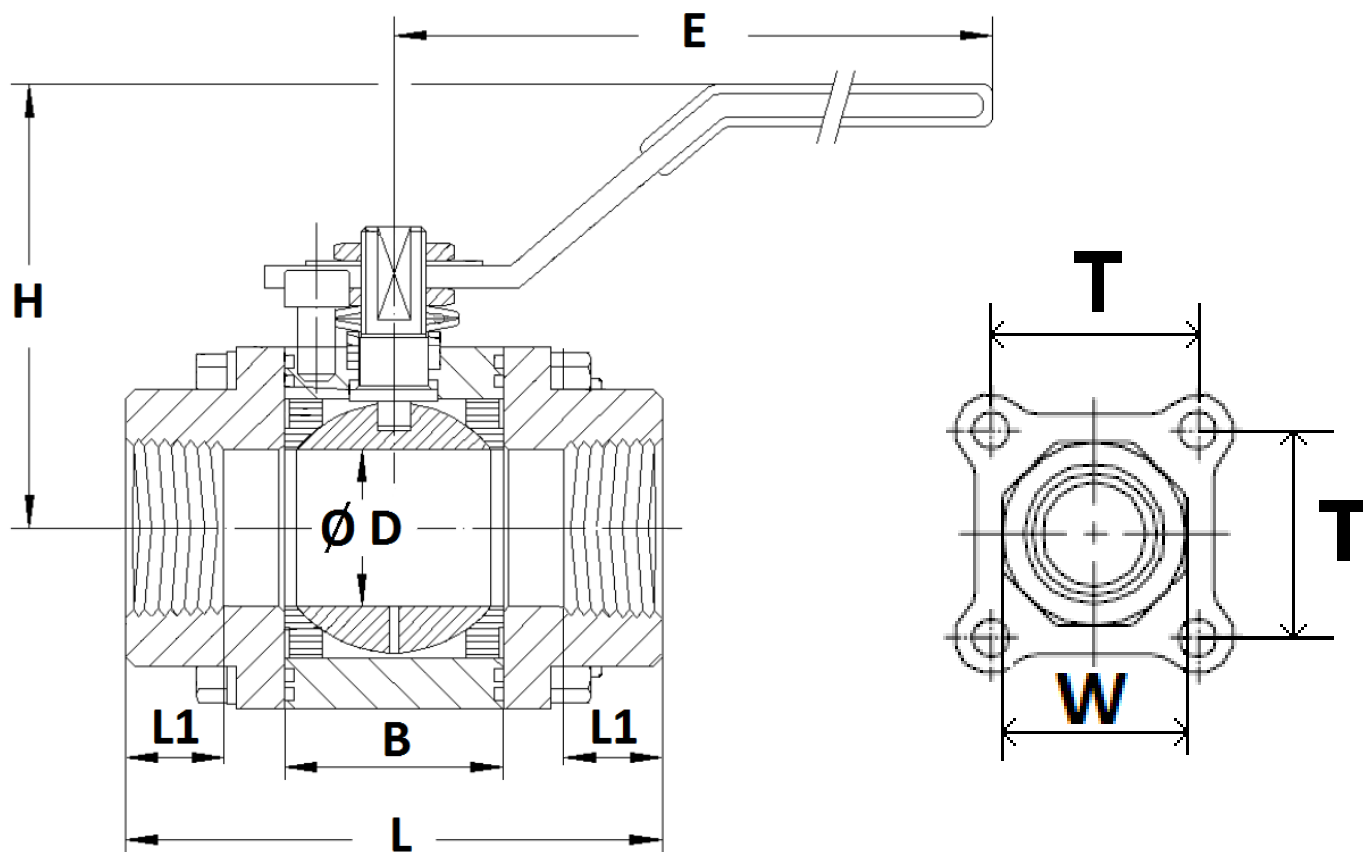
|      |         |
|------|---------|
| DN15 | 9804161 |
| DN20 | 9804162 |
| DN25 | 9804163 |
| DN32 | 9804164 |
| DN40 | 9804165 |
| DN50 | 9804166 |

(\* : Included in gaskets kit)

| Item | Designation            | Materials                        |                                  |
|------|------------------------|----------------------------------|----------------------------------|
| 1    | Body                   | ASTM A105N                       |                                  |
| 2    | Ends                   | ASTM A105N                       |                                  |
| 3    | Ball                   | ASTM A479 316/316L               |                                  |
| 4    | Stem                   |                                  |                                  |
| 5*   | Body gasket (firesafe) | Graphite                         |                                  |
| 6*   | Body gasket            | PTFE                             |                                  |
| 7*   | Thrust washer          | DN 15-40                         | PTFE filled with 25% glass fiber |
|      |                        | DN50                             | Carbon TexPTFE                   |
| 8*   | Seat                   | PTFE filled with 15% glass fiber |                                  |
| 9*   | Gasket                 | PTFE filled with 25% glass fiber |                                  |
| 10*  | Packing                | Graphite                         |                                  |
| 11   | Packing gland          | UNS31600/S31603                  |                                  |
| 12   | Elastic ring           | AISI 301                         |                                  |
| 13   | ID plate               | Aluminium                        |                                  |
| 14   | Nut                    | ASTM A582 AISI 303               |                                  |
| 15   | Handle                 | Zinc carbon steel                |                                  |
| 16   | Nut                    | ASTM A194 GR.2H                  |                                  |
| 17   | Screw                  | ASTM A193 B7                     |                                  |

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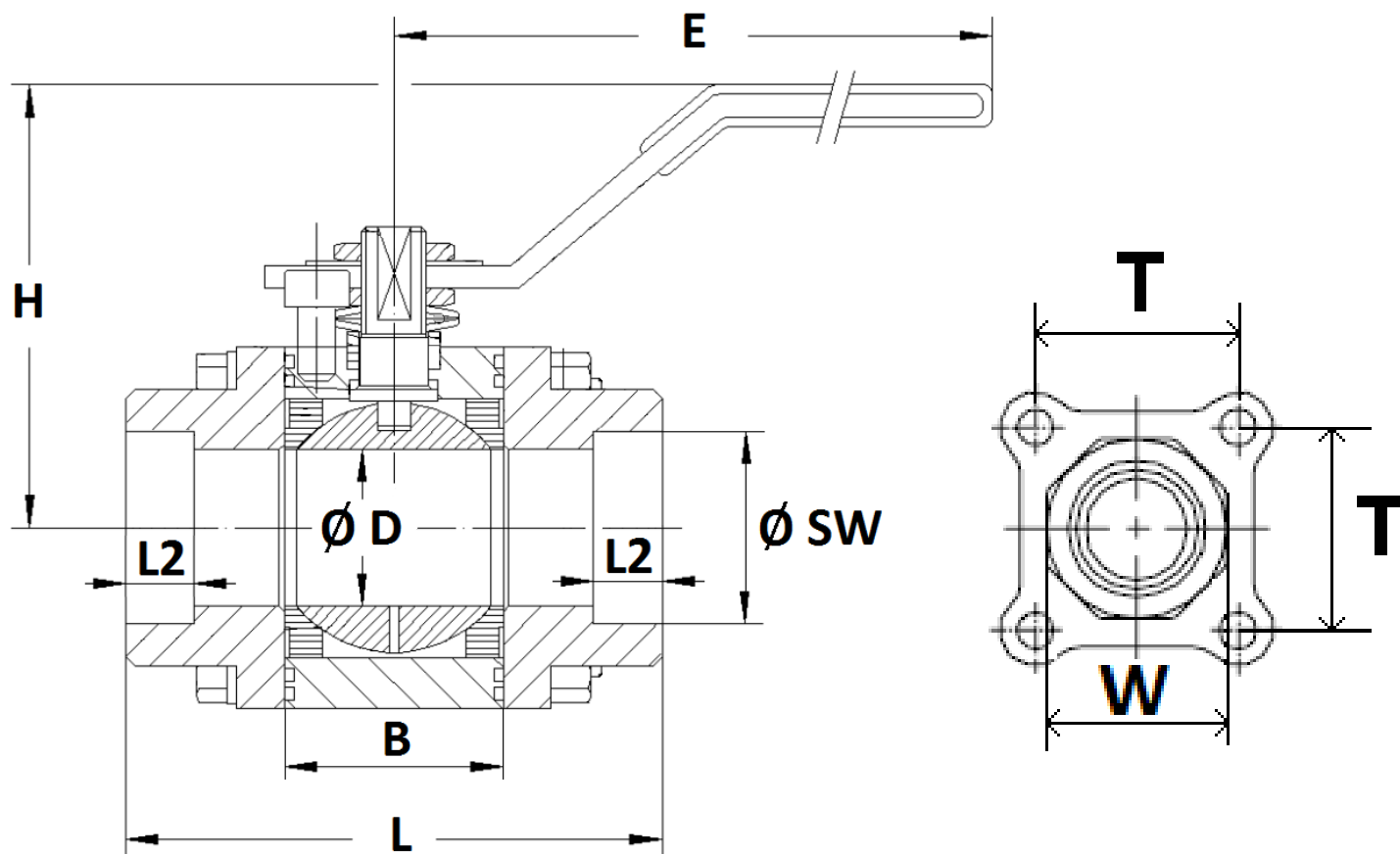
**SIZE THREADED NPT TYPE ( in mm ) :**



| DN (mm)        | 15     | 20     | 25     | 32     | 40     | 50     |
|----------------|--------|--------|--------|--------|--------|--------|
| NPS (")        | 1/2"   | 3/4"   | 1"     | 1"1/4  | 1"1/2  | 2"     |
| Ø D            | 14.2   | 20.5   | 25.4   | 31.7   | 38     | 51     |
| B              | 21     | 28     | 37     | 45     | 50     | 62     |
| L              | 80     | 100    | 110    | 120    | 140    | 160    |
| L1             | 14     | 14     | 17.5   | 18     | 19     | 23     |
| E              | 160    | 170    | 170    | 226    | 230    | 310    |
| H              | 78     | 100    | 100    | 123    | 128    | 155    |
| T              | 35.4   | 45.25  | 50.9   | 59.4   | 68.6   | 83.45  |
| W              | 32     | 42.5   | 52     | 58     | 71     | 78     |
| Weight (in Kg) | 1.25   | 2.4    | 3.11   | 4.5    | 6.2    | 10.2   |
| Ref.           | 745004 | 745005 | 745006 | 745007 | 745008 | 745009 |

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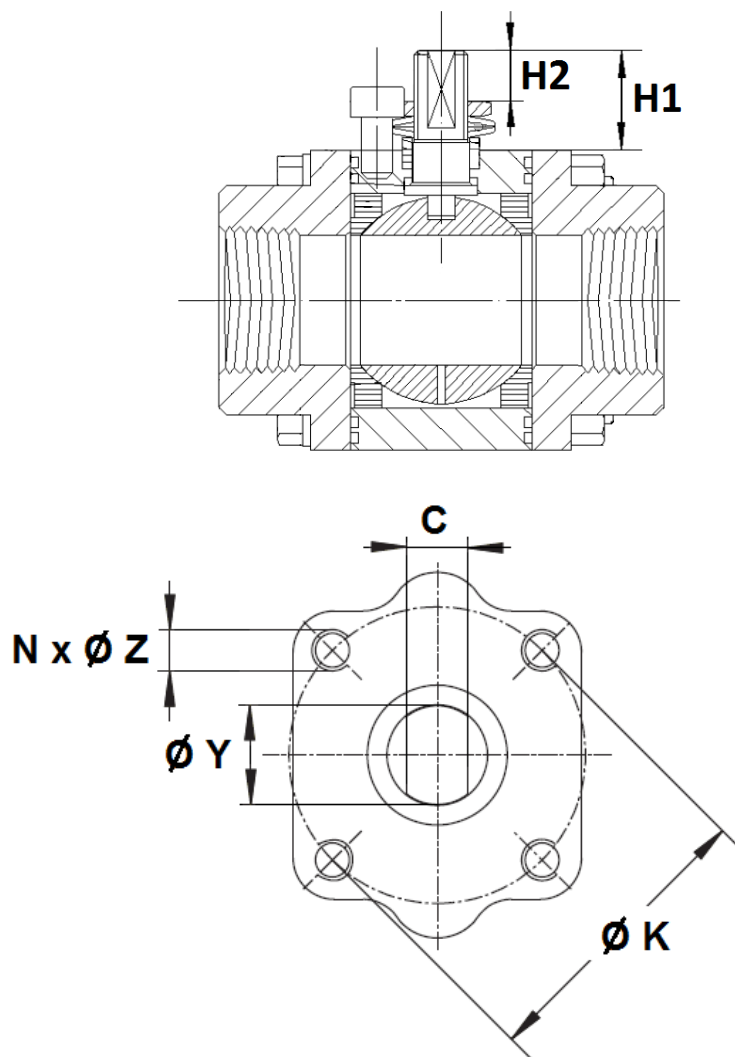
**SIZE S.W. TYPE ( in mm ) :**



| DN (mm)        | 15     | 20     | 25     | 32     | 40     | 50     |
|----------------|--------|--------|--------|--------|--------|--------|
| NPS (")        | 1/2"   | 3/4"   | 1"     | 1 1/4" | 1 1/2" | 2"     |
| Ø D            | 14.2   | 20.5   | 25.4   | 31.7   | 38     | 51     |
| B              | 21     | 28     | 37     | 45     | 50     | 62     |
| L              | 80     | 100    | 110    | 120    | 140    | 160    |
| E              | 160    | 170    | 170    | 226    | 230    | 310    |
| H              | 78     | 100    | 100    | 123    | 128    | 155    |
| L2             | 12.7   | 14.5   | 16     | 17.5   | 19     | 22     |
| Ø SW           | 21.8   | 27.2   | 33.9   | 42.5   | 48.8   | 61.2   |
| T              | 35.4   | 45.25  | 50.9   | 59.4   | 68.6   | 83.45  |
| W              | 32     | 42.5   | 52     | 58     | 71     | 78     |
| Weight (in Kg) | 1.25   | 2.4    | 3.11   | 4.5    | 6.2    | 10.2   |
| Ref.           | 745115 | 745120 | 745125 | 745132 | 745140 | 745150 |

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**ISO 5211 MOUNTING PAD AND STEM SIZE ( in mm ) :**



| Ref.       | DN (mm) | 15             | 20             | 25             | 32             | 40             | 50             |
|------------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
|            | NPS (") | 1/2"           | 3/4"           | 1"             | 1 1/4"         | 1 1/2"         | 2"             |
| 745 / 7451 | H1      | 10.3           | 17             | 25             | 38.6           | 38.5           | 44.5           |
|            | H2      | 7.9            | 13.5           | 15.7           | 24             | 24             | 27             |
|            | C       | 5.4            | 7.5            | 7.5            | 8.9            | 8.9            | 14             |
|            | Ø Y     | 10 (M10 x 1.5) | 12 (M12 x 1.5) | 12 (M12 x 1.5) | 14 (M14 x 1.5) | 14 (M14 x 1.5) | 20 (M20 x 1.5) |
|            | Ø K     | 36             | 42             | 42             | 50             | 50             | 70             |
|            | ISO     | F03            | F04            | F04            | F05            | F05            | F07            |
|            | N x Ø Z | 4x M5          | 4x M5          | 4x M5          | 4x M6          | 4 x M6         | 4 x M8         |

**3 PIECES SWING BALL VALVE FORGED A105N CARBON STEEL CLASS 800****STANDARDS :**

- Manufacturer certified ISO 9001 : 2015
- DIRECTIVE 2014/68/EU: For liquids or Gas of Group 1
  - DN15-25 (NPS 1/2"-1") : Article 4, §3 (SEP), no CE marking
  - DN32-50 (NPS 1"1/4-2") : Risk category II, CE 0036 marking
- Certificate 3.1 on request
- Construction according to ISO 17292
- Designing according to ASME B16.34
- Pressure Tests according to API 598, table 6
- Fire safe according to API 607 version 4
- Threaded NPT ends according to ANSI B1.20.1
- SW ends according to ASME B16.11
- ISO 5211 mounting pad
- ATEX Group II Category 2 G c T3 Zone 1 & 21 Zone 2 & 22 (optional marking)

**ADVICE :** Our opinion and our advice are not guaranteed and SFERACO shall not be liable for the consequences of damages.  
The customer must check the right choice of the products with the real service conditions.